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THE PHILOSOPHICAL REVIEW.

THE SOUL AND MATTER.[1]

THOUGH philosophers have declared these many years that materialism is a dead issue, that world-view is probably stronger now than ever before. Not that more philosophers are confessed materialists—they are not; but that the theses of materialism, however formally disowned, are practically accepted today by a greater number of both professional and non-professional thinkers. For the social democracy of our era sweeps by its intrinsic logic toward a materialistic evaluation of human interests; and the thinker, steeped in that democracy, wishes not to re-direct, but to follow and fortify the tendency of his time.

How then does democracy lead to materialism? Through its adoration of publicity, of what commends itself to the group. One who regards society as the source of political and moral right, will like to find in social confirmation the test of truth. Now the one great phenomenon which is socially confirmed is the external world, *i.e.*, the material world. Our knowledge of that world is codified in science. Democracy, as soon as it is a little educated, worships science, the body of knowledge verifiable by all. The scientist demonstrates his results on the laboratory table, or the screen of the lecture hall; they are open to the inspection of every man, and their authority lies in the consensus of witnesses. The essence of a proper scientific experiment is that it can be repeated by another experimenter. Scientific truth is not an insight, but an exhibit open to the public. Science knows no privileged intuition, superior to the social test. In art or religion, the individual knows the value of his inspiration; he seeks social approval precisely so far as he is not sure of his message.[1] Hence these disciplines languish in our day, or are transformed, as Protestant Christianity is being transformed, into a scheme of social reform. For the age of democracy is the age of science, as both live upon publicity. And thus the dialectic of history has conferred on science today that same exclusive prestige which the Church enjoyed in the Middle Ages. What science teaches, is certain knowledge; faith and poetry are not other kinds, but a lesser, if not a vanishing degree of knowledge. But the public phenomenon is the material world, and science's conquests lie in that domain. Truth accepted by all in ethics, æsthetics, religion, psychology, there is little or none. How could a spiritual principle be seen in public? Science, in short, is but knowledge of matter and its laws. These are seen clearest, of course, in the simplest realm, the inorganic; physics is far and away the most successful science. Hence it is taken as the source and the type of all knowledge; biology becomes a branch of physics, and psychology in these latter days a branch of biology. So it is at least in North America, where we have practically no vitalists or animists. And this, after all, is straight materialism. In Europe, where democracy has not penetrated so deeply, mind and life, though eluding the screen and the table, are still respected for themselves; and we have a Driesch, a Bergson, a McDougall — even a Wallace and a Lodge. But for the democratic thinker, reality is the socially verifiable, which is the subject-matter of physics; the mechanical scheme, where all is impact and recoil, attraction and repulsion of particles, where everything has its cause, where the laws of the conservation and distribution of physical energy exhaustively describe everything that occurs — this scheme is the outline of all certain truth. Mind, life, and spiritual values are but instances, complicated though they be to the last degree, of these processes. Materialism, oldest of philosophies, so often wounded to the death by its foe idealism, has healed its deadly wound and assuming the garments of democratic science, re-enters the arena.

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[1] Read as the President's Address at the annual meeting of the American Philosophical Association held at Vassar College, December 28–30, 1921.

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[1] *Cf.* H. Bergson, *Mind-Energy*, p. 4.

Not only as a theory of reality does materialism appeal to the democrat; to his practical aims also it is congenial. For he is above all things an altruist. The gospel of equal opportunity is but the Christian precept of love toward one's neighbour; why should I trouble to see that another man has his chance of a living unless I sympathize with him? Sympathy, kindness, tactful consideration — these are the democratic virtues, practised in this country today probably as nowhere else and as never before, except among the early Christians. So we find it our duty to provide employment for all and to feed the starving nations. Readily enough does materialism lend itself to this programme. Are not these goods material goods? And while no doubt the ensuring of them is a real duty, yet that duty is so large and difficult in the execution, that the result is an exclusive concern with bodily needs and welfare. In fact, almost the only non-material good that we wish to provide for all the people is education. But who are to be the educators? The materialists? In large measure they are actually so, and in a scientific age the measure is likely to become larger.

On the emotional side as well is materialism in harmony with democracy. The materialist is always a cheerful being. He has got all the reality he wants; he need not resort to a transcendental realm, or another life. The laws of material process have been proved by science; he has not to strain and sweat to convince men of their truth. Throwing off the incubi of self-condemnation and fear of a God whose ways are above our comprehension, he is happy at finding definite problems to settle, succouring his fellows in their economic need. His religion is the religion of healthy-mindedness; he has no theoretic problem of evil to worry over, only practical tasks to perform. The laughing Democritus, the pleasant Epicurus, commend themselves to the optimistic American, who also laughs more than others, and is ever congratulating himself on his sense of humour. For democracy is the most hopeful of creeds, as it leads each man to believe that he is potentially the equal of all, and that all together can work out their earthly salvation. The austerities of theism, of a broken spirit seeking only to do the will of its Maker, find little response from the self-confident democrat. He turns rather to the gospel of happiness and efficiency which the materialist offers.

Nevertheless, materialism has its category of sin. When the ten commandments and the Trinitarian theology are cast overboard, their place is taken by the ideal of scientific mechanism. It becomes our duty to make each man a well-oiled cog in the social organism — an organism being ultimately a machine. All individuality must conform to standards fixed by the scientific expert; education is meted out in unit-hours, the birth-rate controlled by Mendelian principles, alcohol forbidden because it curtails efficiency — in short, all conduct is to be rated according to its effect on the whole social body. And in such a mechanized life, sin assumes two forms: (1) belief in things that cannot be brought under the measuring-rod of physics, *e.g.*, irreducible mind, telepathy, departed spirits, prayer, and (2) respect for personal liberty and enjoyment as in some degree ends in themselves. Psychical research is dubbed superstition, and the individual self an illusory abstraction. Such is the picture whose outline the dominant tendencies of our time are tracing; it is the picture of a world wherein the laws of the movement of material particles, and nothing else, have the control of our destiny.

And what has our professional philosophy to say about it? Do not most of us think of philosophy as the system of scientific knowledge, relegating to the background artistic and mystical experience? But let us see what the schools have to say. We shall consider only the three most aggressive and proselyting — pragmatism, extreme realism and absolute idealism; we deliberately neglect as having at present far less general acceptance, personalistic tendencies and the type of pluralism of which Ward's *Realm of Ends* is so impressive an instance.

The pragmatic school, which is the most influential in this country, plays directly into the hands of materialism. It takes the cue from biology, which with us is a mechanistic, and therefore materialistic affair. Consciousness becomes no longer even a diaphanous remnant of the soul, but is defined in terms of the occasion at which it arises in the body; it is now a tentative or implicit reaction of the organism to a stimulus, now the fact of the co-ordinated responses of various muscles. Pragmatism paved the way for the new psychology of behaviour, which is frankly materialistic in its procedure. It makes no difference if the pragmatist espouses a theory of knowledge which calls matter an abstraction, and talks of experience as the only reality. For this experience in turn follows the laws which govern the body-laws of chemistry and physics; and whether these laws are denominated hypostasised concepts, or purposive creations, or short-hand descriptions, they may not be transgressed. The materialist has the last word.

In the same situation is extreme realism, or the doctrine which would define mind wholly in terms of its objects. These objects are either physical, in which case materialism at once follows; or they are non-physical entities such as concepts, suppositions, or other *Gegenstände*. In this case we have to ask whether the appearance of these beings to the mind is determined by the nervous system and the other bodily organs. If it is so determined, mind is at the beck and call of material processes, and the position is tantamount to materialism. What boots it that the concept $\sqrt{-1}$ is not a material object, so long as our thought of that concept is conditioned wholly by the currents of the nervous system? If indeed the realist holds that the concept is irreducible and affects our bodily behaviour, he is then an interactionist, and interaction is certainly inconsistent with materialism. But how many of our philosophers today are interactionists? A super-material sphere of timeless conceptual entities offers no escape from the network of material causation; for these timeless beings are as impotent as shadows. One who thinks to avoid materialism by such a device is like a man floating on a stream, who fixes his gaze on a tree and imagines that thereby he ceases to be carried along. Materialism only claims that every event, spiritual as well as physical, could be accounted for, as is the orbit of a planet, by previous physical events alone.

We might go all the way with Berkeley to his "*esse* is *percipi*," and even then be materialists. If *percipi* is conditioned upon the anatomy and physiology of the organism, and upon the laws of inorganic nature, it is no refutation of materialism to reduce all to *percipi*. It simply becomes a question how *percepta* and perceivers are governed; and if they are governed wholly by the laws of matter, materialism again has the last word.

Absolute or speculative idealism, which is very influential among us, would seem to give no aid to materialism. Yet, granting that mind is the supreme reality, we must ask: what is that mind? Not another entity, we are told, correlative to material body and process; rather the integration and mutual dependence of material processes, as we find, for example, partly realized in the human organism. Mind is here, of course, no agent, like a moving ball or a magnet; it is not even a guide or director of the bodily processes.[1] It is simply the fact of system. No single act of the living body is caused by mind; causal explanation lies on the lower and material plane. We are saved, doubtless, from the name of materialism, but not from its consequences. Mind is rescued for the whole at the cost of its effectiveness upon the parts. The materialist's account of the body is adequate to the needs of the body. In point of detail there is little difference between the idealist's account of habit-formation, instinct, or affection, and that proffered by the student of behaviour. Idealists would no more interfere in biology or psychology than they would in physics. But since they raise mind to so high a plane as to prevent its interference in mundane affairs, they do resign to the materialist a practical control of the field. Idealism has been called a closed system; there could hardly be a greater misunderstanding. It is the openest ever conceived by man, as it permits the details of history to be managed in any way we please. We do not question the truth of idealism, but its relevancy to the issue of materialism with spiritualism. The materialist does not care how the world is interpreted so long as human temporal destiny is controlled by the laws of physics. And the idealist expects the earth to cool off, and human values to disappear (among them the idealists) quite as does the materialist; also, like the materialist, he places the finite personality in the realm of appearance.

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[1] *Cf.* Bosanquet, *Principle of Individuality and Value,* Lecture 5, appendix 1, "Guidance-Theories."

Whatever names we use, whatever devices of epistemology we employ, reducing matter to a phase of mind, a concept, a relation, an image, and causation to a fiction, mind has pretty well become to us a meaning, not a power. It is beside the point to argue that this result does not affect humanity, so long as we solve our practical social problems. The materialist will urge one solution of these, and the dualist a very different solution. The former will insist that all human problems be treated by scientific method alone, by sociological law and mental test; his opponent, believing that some aspects of life are outside the mechanistic purview, such as personality, freedom, artistic and religious experience, will insist that these be allowed to develop in their own way. A socialism governing the individual by scientific standards is confronted by an individualism which, not rejecting a certain degree of sociological supervision, yet believes in a modicum of personal independence. This practical issue, which is daily becoming sharper with us, cannot be finally adjusted apart from a whole philosophy of life. And in that philosophy the issue raised by materialism is the central one.

Has mind then any properties or functions which cannot be described in terms of physical process? Has it any independent existence or power? Is it more than a form or background, in which, as in dark space, all events occur, but which is no more able than that space to control the events? Is it as truly an agent as electricity is an agent? We shall try to set forth evidence for an affirmative answer to these questions.

Suppose we remember a visit to the Azores 20 years ago. That original visit, we are told, left paths in the nervous system, along which resistance is diminished, and a nervous discharge tends to follow those paths. But this physical account misses the essence of memory. The neural event is a present fact, similar to one that happened in the nervous system before, but not in any sense that past event; while in memory the past event is present. There is here a direct incompatibility between memory and the laws of material existence. Materially the past event is quite non-existent; mentally it is not, for it is present (with all its pastness too) as a part of our conscious experience. No matter whether it is directly present as if in a sort of perception, or present only as something not seen but meant or inferred. In either case it is an object touched by present consciousness; for inferring is a conscious act. Nor does it matter whether we say the past event is re-lived in the present, or the mind leaps back into the past. In either way the gulf of time is bridged. But physically this sort of thing cannot happen, for a present physical event cannot be or contain or touch an event that happened 20 years ago.

This is the first count in the indictment of materialism. It is no dogmatic declaration that consciousness is not physical; we point out a specific and admitted property of consciousness, viz., presence of the past in memory and see that this property is incompatible with the conditions of material reality. For material processes exist only in the present; past and future processes are not. No material process can transcend the present. No behaviour of the bodily organism can indicate any such transcendence, except to a mind which reads the signs. There may, of course, be a kind of response peculiar to memory-situations, as there is one peculiar to sweet smells. But this response is a present process, and it can not lay hold of the past, or be a response to the past. The eyes could not fixate a past object, nor the hands reach for it. There is no question of the difficulty of finding behaviour suitable to the meaning of pastness. Present behaviour can no more recall the past event than punishment can undo a crime. Not a difficult problem, but an impossibility confronts the materialist here.

This point, indeed, is not new. It is implicit in many idealistic writings, *e.g.*, in Kant's Deduction of the Categories in the first edition; and among realists is urged by Bergson and McDougall. Yet these two do not seem to me to bring out clearly the real crux of the argument. Professor Bergson has given a wealth of reasons[1] to show that memory does not depend wholly on the brain. He finds that ability to recall the past does not vary with injury to brain-mechanisms. On the one hand, men lose the power of recalling the past without noticeable brain-lesion; on the other hand, a sound memory for past events may coexist with word-blindness, where a brain-lesion has thrown the associative mechanism out of gear. What is called recognition of an object is, he declares, not memory, but the motor-habit of responding suitably to the sense-datum; and this habit may be broken by a lesion while pure memory remains intact. These arguments, however, seem to me only to prove that memory is relatively independent of associative mechanisms; not that it is independent of all nervous mechanism. There may well be mechanisms in the cortex, not yet suspected, which — for aught that these empirical considerations prove — generate and regulate our consciousness of past events. And when we reflect that amnesia is often due to drugs, blows, or illness, the supposition seems far from being ruled out. The most that Professor Bergson's evidence justifies us in asserting, is our *present* inability to explain pure memory on the basis of brain-physiology alone; for the associative mechanism is inadequate, and we know no other. He never shows that there could be none, owing to the incompatibility between awareness of a past and any physical process whatsoever. The argument only emphasizes the difficulty of the materialistic programme; it is no refutation of the programme's feasibility.

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[1] *Cf. Matière et Mémoire,* Chs. 2 and 3.

Nor does the evidence of Professor McDougall accomplish more.[1] He points out that we learn a series of nonsense-syllables more slowly than a sensible series; as if the 'meaning' of the latter showed the influence of intelligent thought on a brain-process. But a materialist might claim that 'sense' or 'meaning' is an already formed system of brain-paths, an acquired physical disposition, which is more easily retraced than the new paths corresponding to the nonsense-series. To be sure, nobody has proved beyond dispute that this is the case; but until it is proved *not* to be the case, the materialist remains undaunted. McDougall's, like Bergson's, is only a difficulty-argument. Again, memory may well be, as McDougall says, a single "act of apprehension" and not a habit-series. But that does not make it immaterial; we have still to ask, what is there about an act of apprehension that escapes description in terms of bodily response? Until this question is answered, materialism is no worse off. Nor does the fact that memories may persist longer than learned habits — as memories of childhood in old age — show memory immaterial; or any other distinction between memory and motor habit — until a precise incompatibility with physical process is revealed. The failure to find a memory-cell, or a particular sort of response that distinguishes our consciousness of the past, or to equate the laws of memory with those of habit, are not sufficient proof against materialism. We must, no doubt, receive gratefully the testimony of these animists; their array of facts is imposing—far more so, indeed, than the elementary considerations so quaintly phrased by Kant in his section on "Synthesis of Reproduction in Imagination." Yet, taken by itself, this empirical array hardly comes as near to the real point at issue as did the latter discussion. For Kant did point out a way in which mind transcends all possible material process; and the heavy gymnastics which accompanied his pointing should not blind us to the fact that it is a simple matter of observation. Memory re-lives the past or refers to it; no physical event can do that. Once grant, indeed, this statement, and the arguments of Bergson and McDougall become an invaluable empirical confirmation. Without the elementary fact of incompatibility, all the specific differences between memory and brain-habit might some time, for all we know, be explained on physical grounds; with that fact, the differences are transformed, we think, from circumstantial evidence to strict proof.

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[1] *Body and Mind,* Ch. 24, *Memory,* esp. p. 336.

We now come to the second argument against materialism. Not only in respect of time, but also of space, does consciousness show a discrepancy with physical process. When we see the moon, the brain-state and bodily reaction are within the space of the organism, and they exist nowhere else. The turning of head or body, the fixating of eyes, are definite material events;

they are not the moon, and cannot mean the moon. That eyes converge on the moon, letting the light-rays fall on the fovea, is but an occurrence inside the organism, and except to a conscious bystander — a 'behaviourist' perhaps — who interprets the whole thing, this event has in itself no reference to the moon. It no more indicates that orb than the paper which reflects sunlight indicates the sun. The moon is not present to the stimulated retina; it may be regarded (somewhat loosely) as cause of the stimulation, but this cause lies in the past, even though it has moved to its effect with the velocity of light. Consciousness, however, with a velocity exceeding that of light finds the cause immediately present; the distant object is as close in consciousness as the skin of the body. No material process can annihilate that distance, as does awareness. And, as with memory, it matters not whether we consider the moon a direct presentation or only something inferred or meant. Consciousness reaches the object, through whatever sort of psychosis. In short, there is here a flat incompatibility between mind and the limitations of material process. The organism is separated by space from the object to which it responds; mind with infinite speed passes from the one to the other.

A third incompatibility between consciousness and material process appears in the awareness of certain qualities. Memory transcends time at long range; sensation of a colour or sound transcends time at short range. When we see a green leaf, the light-waves enter the retina in succession, and though the titillation along the optic nerve is probably of a lesser speed and brings the successive vibrations into a denser series, they are still successive. No vibration is the one behind it; there is, even in the visual area of the cortex, no identity between the vibration of one electron and that of its neighbour. Be the succession of these vibrations never so close, it consumes time; yet in consciousness the series of them is somehow sensed as one resulting quality, a colour or a pitch. Of a wholly material phenomenon this could not be true, for succession, however short, is always succession. Whether the special nerves have or have not specific energies, is indifferent; in either case the energy is a temporal series. Psychologists used to say that a quality is not the vibrations which occasion it—a dogmatic declaration which, being quite unexplained, could only arouse resentment in the materialistic breast. It is not that quality is a mysterious category, irreducible to quantity or anything else, but that there is a unity not separable into parts, about every quality; whereas a material process occurs in separate instants of time and separate positions of space, which cannot fuse. Of course a series of vibrations may give rise to a total material effect, as when a bombardment breaks down a wall; but the effect in such a case is not identified with the cause. When we see a colour the awareness is not only the result of the successive stimuli; it refers to, means, or is the object. For we see the object itself as coloured, and the indissoluble unity of the colour denies the spatio-temporal discreteness of the vibrations. As memory and perception annihilates distance, so sensation annihilates discreteness.

Professor McDougall has urged[1] that binocular vision, whereby two images are fused into one, shows the unifying power of mind; and perhaps binaural hearing might show the same thing. Yet this argument, though it may be correct, does not bring to light the essence of mind's unity, nor the reason why that unity cannot be material. He denies material explanation on the ground that the brain has no common sensorium—as, *e.g.*, the *corpus callosum* was once thought to be. But the difficulty of acounting for the singleness of the image is not in the duality of the optic lobes and auditory centres or the absence of a *sensorium commune*. Who knows but that, as Lloyd Morgan suggests (*Instinct and Experience,* p. 284), the currents in the two optic nerves may inhibit each other in such a way as to give one resultant image? As a matter of fact, a single optic lobe, or a common sensorium whereto all impressions converged, would not account for the unity which *any* state of mind possesses—be it sensation, or thought, or memory. Even a single pontifical cell would not suffice. For a cell is very complex and manifold; it comprises millions of electrons. And a small volume is no nearer to possessing unity than a large one. Is there more unity in the brain of a minnow than in that of a man? A collection of particles cannot possess the unity which a sensation or thought has; for the particles, however unified, whether by a common limiting volume or by coöperation, remain separate particles, whereas the attributes of a sensation's content,—its colour, intensity, etc.,—are nothing apart from that content. The parts of a sensation, if we may call them so, are fused without loss of distinctness; neither physical particles nor physical processes can be fused without losing their distinctness. This, and this alone, is the reason why the unity which is found in conscious states cannot be expressed in physical terms; it is incompatible with physical conditions.

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[1] *Body and Mind,* p. 246 *ff.*

We should not argue to the immateriality of mind from the fact that we entertain imageless thoughts or other pure 'meanings.' The concept *zero* may be non-sensuous, as far as imagery goes, yet for all that might be an implicit bodily response, and no doubt to a degree is so expressed. As Mr. Watson says: "We watch what the animal or human being is doing. He means what he does. It is foolish to ask him while he is acting what he is meaning. His action is the meaning."[1] But when all the separate events of this action are thought of as the expression of *one* meaning, we have in that meaning a character which prevents it from being merely a bodily affair. It is not the meaning but the oneness that is inconsistent with material conditions. For a meaning can be logically analysed, and the analysis does not tear the parts asunder; while material analysis does just that—as when a chemical compound is separated into its elements.

Nor should we base the uniqueness of mind on the fact that it possesses universals. Idealists have usually done so, and Platonizing realists;[2] and the temptation is strong. For a universal being one and the same in many places and times, seems to transcend material separation. Nevertheless, no refutation of materialism lies that way. A mere abstract universal has no reference to definite times and places; its universality lies in its abstractness. It does not render the future or the past event a present one, as memory does; to gain the presentness, it sacrifices the pastness. It contains nothing incompatible with the space-and-time world. To render the consciousness of the universal incompatible, we must import into it the knowledge that some instances are past, some present or future. And this is to import memory already. And besides this, mind is itself much more than an abstract universal; for it is, we hope to show, effective, and to be that it must be individuated.

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[1] "Is Thinking Merely the Action of Language Mechanisms" ? *Brit. J. of Ps.*, Oct., 1920, p. 103.

[2] This was also the main argument used against the 'behaviourists' in the *Symposium* above mentioned.

So far we have found the nature of mind to lie in the power of including what is materially excluded; the cognitive states of memory, sensation, and perception, seem to accomplish this miracle by transcending time and space. We have now to consider a quite opposite property of cognition, which appears in the phenomenon of attention. As the former faculties unite what is separated, so attention separates what is united; for attention is selective. And this side of mind, complementary to the above, we shall find to be not indeed more essential, but more significant. For it introduces us to that dynamic aspect of mind whereby mind becomes a power and an agency; an aspect which can however be understood only when we consider the second great division of mental phenomena, the affective-conative states. Were it not for these, mind would be an immaterial entity indeed, but only after the manner of a form or relation. It would not have that individuality which constitutes a self and is necessary, as Aristotle taught, to efficient causation. Let us take up, then, some of the characteristics of attention.

We look at only a part of the scene spread before us, we listen to certain sounds alone, we take hold of this thing rather than that, the object we look at, hear, touch, is the object of consciousness, while the other stimuli which are raining in upon the organism excite little or no awareness. Now there is no possible material reason for this. The 'threshold' is physically inexplicable; even incompatible with physical conditions. A difference of intensity in brain-process is in no sense a difference in being. If I am attending to a sound, and oblivious of aught else, still the effects of other stimuli are present in the brain and muscles—faint indeed, below the threshold, yet by no means non-existent. They are material facts just as much as the intensest disturbance of the auditory centres. Yet psychically they have no existence. There is a direct contradiction between the two orders; physically, all the cortical events are, physically some of them are not. As in memory what physically is not, psychically is, so in selective attention what physically is, psychically is not. Nor is the case bettered if, as psychological students of behaviour would do, we dwell upon bodily response rather than brain-excitation. If I am conscious of the dog I am trying to catch, and unaware of sounds in the rear, the coördination of muscles in eyes, legs, hands, is an integrated or systematic response, while the slight reflex of *tensor tympani* is an isolated response; yet though the isolated reponse is as much a response as the arm-movements, I am acutely aware of the dodging animal but not at all of the bird chirping in the tree behind me. Materially, a coördinated group of responses is no more actual than a slight, chaotic or otherwise contemptible reaction; psychically the latter's object drops away while the former's remains. We like to ascribe a mystical virtue today to coöperation, and we think that if introduced into the muscles it may almost generate consciousness; but this is really absurd. An arch or a clock with all their coöperative parts, are no less purely material than a heap of dust; and the incompatibility remains, between the presence of the response in the body, and the absence of its object in attention.

Let us be quite clear as to the point at issue. Not because selective attention shows activity or originality, something apparently *de novo,* is it immaterial; but because its way of acting could not be a physical way. Many thinkers have emphasised the 'spontaneity' of attention, and indeed of all organic functions, as a sign that life and mind are immaterial or non-mechanical. So have done the vitalists Driesch, J. S. Haldane, J. A. Thompson, Bergson, and others. The reply was always open that the spontaneity is but apparent. And it clearly does depend on the presence of stimuli, external and internal, and varies largely with their intensity and complication. There is no way of proving that selectiveness, as of a lower organism which seems to choose its food, implies spontaneity, unless we can show that the attentive function has a property which does not fit material conditions. It is the inconsistency between the two realms that alone can bear the weight of the vitalistic or animistic argument. And attention as a conscious phenomenon in human beings reveals such an inconsistency, for in it certain bodily processes, which are physically as real as the others, become psychically quite non-existent.

Attention may be called the conative aspect of cognition; it is so often directed to the future. Such direction to the future happens either as a relatively passive cognition or as a relatively active purpose. The former case is expectation or foresight, as when we see a missile approaching or correctly forecast the remoter future; in the case of purpose, our behaviour tends to produce the future. Foresight shows the same unity of consciousness that memory shows, and the same discrepancy with physical conditions. In foreseeing what is to happen, one is aware of a future event; and this event, physically non-existent, is present in consciousness. Even were foresight only a reference to the future, and not a present beholding of it, the situation would not be different. It is just as impossible to refer to, as to possess, what is non-existent; just as impossible for the physical organism to respond to a future event as to a past event. Nothing, indeed, about a bodily response can indicate that it is a response to the future rather than to past or present—except to a mind that already knows the signs of futurity. But the future event is psychically existent in another way than that of presence; it is effective. Foresight determines action when we jump away from the imminent projectile. A non-existent thing could not be a cause; and that is why materialists must always object to teleology. Yet in cases of purposed action, teleology is just what seems to be the fact. So the problem is forced upon them of describing an intention to act thus and so in material terms. This they attempt to do by such words as 'implicit,' 'tendency,' 'readiness,' 'set,' *etc.* For example, Professor Thorndike writes: "The sight of the prey makes the animal run after it, and also puts the conductions and connections involved in jumping upon it when near into a *state of excitability* or *readiness* to be made."[1] "When a child sees an attractive object at a distance, his neurones may be said to *prophetically prepare for the whole series* of fixating it with the eyes, running towards it, seeing it within reach, grasping, feeling it in his hand, and curiously manipulating it."[2] Now 'excitability,' 'readiness to be made,' 'prophetically prepare,' are but paraphrases for physiological potency; and they give not the slightest inkling of that actual foresight of the future which a child frequently possesses, and perhaps sometimes an animal. 'Readiness' or the 'implicit' describe truthfully enough, present material states; but the future which is mentally present can be, no more than the remembered past, a present material state. If a set of the muscles, an aptness of neurones for discharge, or other potencies of the future were a full guarantee of conscious intent, then a compressed spring would be planning its release, and a cartridge presaging its explosion. Between tending and intending lies the whole length of the evolution of life; a length which the materialist, for whom existence dwells only in the present, cannot compass. Potentiality, to which the materialist continually appeals, is but a physical condition, while in the consciousness of what one means to do the potency's fulfilment is actually present. As common speech has it, we 'realize' beforehand what we are going to do. Consciousness hereby shows itself to be, as Professor Montague has well said, no mere potency, but the actuality of a potency. Such actuality, however, is physically impossible while the potency remains unfulfilled. But the materialist, knowing that this is so, rules it from the universe with rigid exclusion, as a Puritan would have cast out a harlot from the house of God—and with something of the same spirit; for history repeats itself.

We have said that in purposed action an idea of the future becomes a present thing and determines the behaviour of the organism. The materialist of course urges that this conflicts with the conservation of energy and is impossible. That induction from inorganic nature has, I have elsewhere argued,[1] never been demonstrated of conscious animals. But the way in which a mental fact brings about material changes is to be understood from the second great class of mental phenomena, the affective-conative. These have, indeed, been too much neglected by recent definers of consciousness. Owing to the regrettable influence of epistemology, notice has been given mainly to cognition, as if this were the essence of mind. But as belief is notoriously the sport of the passions, so the conative-affective states are more fundamental than the cognitive. For in cognition we are relatively passive, and do no more than reproduce, while desire dictates the choices of selective attention and thereby the ideas which control our bodies' behaviour. In this field resides the agency of mind, and here alone shall we be able to discern in mind a degree of power which the materialist could neither guarantee nor admit.

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[1] *Educational Psychology,* I, p. 126. Italics mine.

[2] *Op. cit., ibid.* Italics mine.

But, to begin with, we must dislodge an error. The efficacy of conation is not proved by the fact of persistence through long periods, of working against obstacles, of comprehending many means under one end. If a man's determination to be wealthy continues through years of poverty, in the face of disheartening competition and bodily weariness, such perseverance is not necessarily the fruit of a psychical rather than a material force. Lasting quality, comprehensiveness, intensity, do not turn a bodily impulse into a conscious one. Who knows but that some day the materialist will learn so much about the human body as to explain these? Does not gravitation in the solar system account for processes whose endurance, intensity, and organized character are on the largest scale? Such arguments only point the difficulty of the materialist's task; a difficulty which he would be the last to deny. But incompatibility of the simplest conation with the limitations of physical nature is the one way of meeting his position. When that is made plain, indeed, the difficulty offers a confirmation; for if a programme is hopeless, its difficulty is natural, whereas no amount of difficulty can demonstrate hopelessness.

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[1] *Journal of Philos.*, Oct. 27, 1921.

Conation and affection, as is well known, are intimately related; and by study of the latter, we believe, is the essence of the former revealed. Let us begin by granting all to the materialist; let us accept his description of the affective states, keeping in the background for the moment the fact of consciousness. These display a duality: pleasure and pain. Pleasure and pain are not, like cognition, relations between the organism and an outer object to which it responds, but relations between processes within the organism. They consist respectively in the re-inforcement and inhibition of one process, or several, by another or others. Thus, when the organism re-inforces some reaction, that reaction is so far pleasant; when it inhibits the reaction, the latter is unpleasant, painful, or disagreeable. Professor Thorndike says, "when any original behaviour-series is started and operates successfully, its activities are satisfying and the situations which they produce are satisfying," whereas "when any original behaviour-series is started, any failure of it to operate successfully is annoying" and "the word 'successfully' must be defined objectively."[1] "Successful operation can in fact be satisfactorily defined, and what will originally satisfy and annoy can be safely predicted, only as a characteristic of the internal behaviour of the neurones."[2] "The essential satisfyingness in these cases is then the conduction along neurones and across synapses that are ready for conduction and the essential annoyingness in these cases is the absence of such conduction."[3] "Call . . . whatever makes up the path which is ready for conduction—a *conduction-unit*. Then *for a conduction-unit ready to conduct, to do so is satisfying,* and *for it not to do so is annoying,*" while also, "for a conduction-unit unready to conduct, to be forced to conduct would be annoying."[4] Mr. Watson gives an interpretation rather more specific;

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[1] *Educational Psychology,* Vol. I, p. 124.

[2] *Op. cit.,* p. 125.

[3] *Op. cit.,* p. 127.

[4] *Op. cit.,* p. 127.

instead of the activity of neurones in general, he refers to impulses connected with the sexual functions. What leads to or furthers the characteristic sex-behaviour is pleasant, what hinders that is unpleasant.[1] Or again, in the words of Professor Ziehen: "The pleasure-pain component of the psychophysiological process is identical with the readiness of the cortical cells to discharge. A certain disturbance in the cells of the cortex (for example, a chemical change) expresses a certain sensory and ideational conscious content. In the case of any such disturbance the readiness to discharge can vary greatly —that is, the tendency and capacity to transmit the disturbance (for example, the chemical change) further along the association or projection fibres which arise from the cells, can be greater or less. The positive affective processes express a great readiness to discharge, the negative a slight readiness."[2] Thus pleasure and pain are relations within the organism. If the disturbance or process is in harmony with the tendencies of the part of the organism concerned, there is pleasure; in the opposite case, there is pain (or the diagreeable).

But there is another fact about these affective states; and a material fact too. If pleasure consists in agreement, and pain in disagreement, between a process and a tendency, yet they differ from other physical instances of agreement and disagreement. The disagreement which constitutes pain is quite distinct in its consequences from a physical conflict of forces. A stone rests on a table, and the opposition between gravitation and the upward push of the table results in stable equilibrium. The stone remains at rest, impassive. In the living body, the result of conflicting tendencies is anything but rest. The animal struggles to escape from the painful situation. Pleasure, on the other hand, the bodily processes tend to repeat; we incline to prolong a pleasant sensation. But agreement or coöperation of forces in the inorganic world has no tendency to re-instate itself. If a heavy body's support is withdrawn, the withdrawal furthers the tendency to fall, but the event leads to no continuation of itself. This distinction of course the materialists recognize. As one of them declares: "The movements of the projicient sensori-motor system are compelled by the affective disturbance and become a *means* to acquire stimuli which will re-establish a comfortable affective state. The status of affective rest is the *end* state of the dynamic striving."[1] Or as Thorndike says: "By a satisfying state of affairs is meant roughly one which the animal does nothing to avoid, often doing such things as attain and preserve it. By an annoying state of affairs is meant roughly one which the animal avoids or changes."[2] In short, a behaviour-series of *agreeing* parts tends to *continue*, while one containing a *disagreement* of the parts, an inhibition, tends to *remove* the disagreement or inhibition.

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[1] *Behaviour: An Introduction to Comparative Psychology*, pp. 22–25.

[2] Quoted in Thorndike, *op. cit.*, p. 126, footnote.

Now let us see what this materialistic account implies; and first with regard to pleasure. Suppose a part of the central nervous system so keyed and set as to be ready for a certain type of activity; say, the pneumogastric nerve ready to call out the activities of digestion. Then a stimulus occurs in the shape of food entering the stomach, which actually starts the digestive process. The congruence of set and stimulus is normally pleasant, and we tend to repeat the process—to take more food until satiety breaks off the series. How account for this curious coincidence, that congruence goes with a tendency to continuation? The continuation simply means that each of the congruent factors, in the very act of exercising its own function, fosters and furthers the other. The set of the nerve helps its discharge, called out by the food-stimulus, and the discharge promotes the favourable set of the nerve in turn; otherwise the process would not continue. For, by the materialistic account, if the nerve after having discharged, were *unready* for further discharge, the process would become painful—which it is not—until the organic situation called satiety intervenes. In other words, we have in a normal pleasure like food-taking a mutual furtherance of bodily processes. This sort of thing, where each of two or more processes aids the rest in the very act of proceeding, is common in living organisms; perhaps even a fundamental trait of life. In an animal or plant each organ, tissue, or cell by fulfilling its own function promotes the functioning of others and thereby of itself in turn. And if pleasure consists in just this mutual support, that explains why normal healthy life is *ipso facto* pleasant, and interruption thereof painful; at least in a conscious animal.

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[1] E. J. Kempf, *The Autonomic Functions and the Personality*, p. 78.

[2] *Ibid.*, supra, p. 123.

But besides all this material description, is the fact that pleasure is a conscious phenomenon. Pleasures, and pains likewise, are nothing if not felt. Now to feel a situation pleasant is to like it, to tend to move toward it, and remain in it; and the reverse for pain. The aspect in which pleasure is seen to be self-continuing is the aspect of consciousness. So if the self-continuing is but the mutual promotion of certain bodily processes, that mutual promotion is but mind. So far would the materialist go perhaps, levelling mind down to a material relationship. But we would go further, and declare that this mind has attributes that cannot be physically defined; that it escapes the material net, because it is an agent, and acts in a way that matter could not do. Mind, though more than cognitive, is probably never quite without cognition, however vague be that cognition. The pleasant situation is recognizable, distinguishable from other situations, to some minimal degree at least. Being object of cognition, it has that peculiar property we noted above, of being present at once in two or more times or places. The pleasant event which we consciously seek to continue becomes a future event thought of, however dimly. We *mean* to prolong the event; it is the *end,* in however rudimentary a fashion, of a process of purposed action. Now, as just said, the conscious aspect of pleasure is its attribute of self-maintenance; and this self-maintenance is the working of a system of mutually promoting processes. But the cognitive state wherein the maintenance of the pleasure is an end, a future event now present in mind, is the conscious aspect of pleasure. Accordingly, that state is the operation of a system of mutual promotion. When such a system operates, it is mind operating by a purposed end, however obscurely that end is fore-seen. When bodily processes so interact that each fosters the other and in turn itself, we have what could not possibly be a merely material system. For this process is admittedly a causal one, giving rise to the continuation of the system, while at the same time its causation proceeds by the presence of a future end. The system of mutual promotion, being mental, is a case where each bodily process brings about its natural physical effect, but yet that effect is so regulated as to further its cause in turn. In other words, that effect is regulated by the future; in psychical terms, by the desire of the organism for the present situation. And this sort of agency is incompatible with material conditions, which do not permit the future to be a cause.

The point is that our result is implied by the materialist's description, together with the acknowledged fact that pleasure is a conscious state, not wholly without a cognitive element. It was indeed the presence of the cognitive element that led us to see that pleasure is irreducibly mental; but the analysis showed pleasure to be quite other than cognition and also more significant of mind's independence. In pleasure, the mind is active; and if the action is the action of ideas, yet the ideas act only as contributing to the system called pleasure. Did we not have feeling, we might remain forever passive spectators of the scene about us, linking up various parts of it indeed in memory, perception, and sensation; but presumably having no motives of action and no conception of the good. For however the good and the desirable be eventually defined, pleasure is the rudiment of both. And we may notice in passing that as a consequence, this account of pleasure as an interlocking system of parts which endeavours to maintain itself should be significant for the theory of value. But that is another story.

There is then no question of trying to find some mechanism in the body that would account for the mutually promoting process. If we call these an organic system, then our result is that an organic system is incompatible with the limitations of physical process. One thinks of certain lasting material collections, such as the sun and the planets, or a double star with its two bodies revolving perennially about a common centre of gravity; and these are self-maintaining to be sure. But there is no evidence of any consciousness in these assemblages; there is no evidence, as there is in pleasure, of a cognitive mind which looks toward the future. And so there is no evidence that these are organic systems as we use the term. Nor do we here urge that the whole living body of a plant or animal is a true organic system. So far as the action of such a body is guided by the fundamental pleasures of food-taking or sex, it does seem to be an organic system. But until there is good testimony to the presence of consciousness in all cell-life, it would seem that vitalism cannot quite prove its point. Irreducible mind is the only thing that can exhaust the resources of mechanism. Of course, however, that does not mean that mechanism is correct. It seems to be definitely incorrect where the organism feels pleasure, and desires a situation or an object.

Desire or conation, as conscious processes, arises originally in connection with the organism's tendency to retain or further its felt well-being. In this sense feeling is the primitive part of mind, which renders it active and able to make changes, first in its body, then in the outer world. And because desire must be selective,—as any system admits qualified members alone—consciousness is from the beginning selective, and attention must have that character which is so inexplicable on a physical basis. There is selective attention because there is desire; and the first objects attended to are objects which secure vital well-being. It is then, we believe, from the affective phenomena and not from cognition, that the deeper insight into the nature of mind may be gained.

Having treated of pleasure, we have now to see how pain reveals consciousness. Pain is, in material terms, an opposition of direction between tendencies or processes; as when a nervous discharge takes place while the neurone is unready, or is inhibited in spite of the neurone's readiness. Now if pleasure tends to be continued, pain tends to be checked. The animal struggles to escape from irksome captivity, the organ to throw off a destroying agent. Felt pain is the mark of this relation of opposition between bodily processes or states. Now the overcoming of the opposition is physically but the adding of some process which favours one of the factors. The escape of the animal is the increase of free movement, which confinement prevented; the ejection of a painful poison is itself a movement which contributes to the normal bodily welfare. This is really the pleasure-situation over again. But here the added process is not, while the pain lasts, a present one; and the tendency of the organism to secure that process is the desire of a distant object. That object is not present but remote, and here cognition will therefore be more marked than in the case of pleasure. For in pleasure, cognition, though present, is at a minimum; in pain desire is thwarted and the end is to be sought, wherefore cognition has more to do in the way of seeking it. Hence painful situations teach us new reactions and pain becomes a condition of learning. Pain does not lull to sleep. Cognition here is the primitive negative judgment—'not this but that.' But it is desire that stimulates us to learn.

When we see that desire, which is but conation due to pleasure or pain, is the original and productive aspect of mind, we may gain a better understanding of the unity of consciousness. This unity we met in cognition, but found hard to define. So difficult is the definition, indeed, that many now incline to deny that there is such a thing. But the affective states show it to be no mere figure-head or title; rather an efficacious function. It is the unity of a system of parts which are mutually promoting. The idealists used to define the self so; and they were right. But modern idealism is so bent on pointing to the whole System of Reality that it has too little interest in the special nature and order of the parts. Whereas man is and must always be interested to know the nature of the parts—in particular, of those important parts which we call finite minds or selves. Moreover, idealists have not sufficiently studied the particular phenomena of the body; they have left this to the materialists, content to refute materialism by dubbing matter an abstraction. Had they attended to the bodily processes, they might have found their principle of organic unity at work among those processes, acting as an efficient cause among the physical causes, emphasising some processes in the nervous system, diminishing others, and so selecting one or another as to foster the life of the body and the development of the mind.

Mind then is preferential and selective; it builds up a system of interacting parts, and as this system is one, so the consciousness of a body is one—to wit, a self. It is the selective character, due to the organic form of affective processes, that makes up the individuality of a self. As there is no consciousness that has not affection, so there is none that has not selfhood. That is why there are no impersonal bits of consciousness, and why consciousness is always centred. It is no miracle; it is due to the nature of consciousness as revealed in affection.

In the above account we have omitted many problems and neglected many difficulties. Chief among omissions is perhaps the troublesome question of instinctive behaviour. It seems fair to say that no one has explained the endless diversity, the astounding power of adaptation shown in this department; certainly the materialists have not done so. The conclusion drawn by some is that materialistic explanation can never succeed; which is plainly only an argument from difficulty to impossibility and therefore unsound. Professor Bergson's analysis of instinct into sympathetic insight seems decidedly obscure, though that is no refutation of it; and possibly our own view, emphasising the affective side of mind, is not far removed from his. But our position has been based throughout on definite incompatibilities between admitted facts of consciousness and the nature of material process. Of these incompatibilities we found two sets: those of cognition, which showed a unity both inclusive and exclusive or preferential, and those of affection-conation, which showed this unity to possess an organic, systematic character that makes mind into an independent agent interfering in the physical realm. Further than this we do not at present attempt to define mind.

This completes one side of our thesis. Materialism, conceived in exclusive terms, denying unique spiritual being, is false. But we cannot end with such a result. All great world-systems are profoundly true; and materialism, provided it be taken in wholly positive terms, offers no exception to the rule. A materialism which insists that matter on its positive side, and without the customary exclusions and limitations has, we believe, no point of conflict with the dualism here advocated. Indeed we shall go farther still and allege that unless we understand the truth of positive materialism, we wrongfully curtail our notion of mind. As a man who is unjust to another is thereby unjust to himself, so a spiritualism which denies final truth to materialism becomes formal and impotent. Enlightened materialism, freed from the negations and privations men have read into it, forms the only warrant of substantiality to the self, and becomes the evidence of a soul which may exist in separation from the flesh. Historical materialism and idealism, mutually exclusive as they are, have by their antagonism prevented such a fertile union; with the consequence that the strong old scholastic soul has been slowly bled white. But, no doubt, that soul cannot die, and for a properly conceived materialism is reserved the privilege of restoring that entity to vigour.

What then is a positive materialism, and wherein lies its truth? We have to ask what the materiality of matter really means. Now a body occupies a definite portion of space; also it is more than a bare volume and shape in so far as it tends to occupy always the same volume and shape. This occupation of the same volume,—same in amount and in configuration—is signified by its resistance to alteration when another body impinges upon it. And if the bodies we see do alter their volume and shape, that is because each of them is not truly one body, but a collection of atoms; whereas each atom being a single continuous body does retain always the same shape and volume. Science is ever seeking ultimate atoms which have a definite size and figure, and cannot be dented in or distorted. These atoms, in the face of impact, are to be perfectly elastic; none of the energy of impact alters the extent of the atom, since all of that energy is returned in the recoil of the colliding bodies. Now this attribute which matter possesses is conveyed by the word solidity. To say the atom is solid is to make reasonable the fact that its extent and configuration are permanent. If the atom could be dented in, it must be hollow; there must be empty space within, whereto the surface can be driven by a blow. If the surface cannot be driven in, that is because all the space within is already occupied. So we declare that the volume of the atom is filled with stuff or substance. And stuff or substance means thus the tendency to retain the same figure; nor do these terms mean anything more. For there is nothing else that the concept of solid stuff or substance can signify. It could not mean, for instance, that which we sense. We never sense anything but surfaces; touch and vision, our objective senses, reach only surfaces, and if we cut bodies to see the inside we find nothing but new surfaces. The solidity or substantiality of matter is but a word signifying that in a single continuous body the surfaces tend to maintain the same spatial relations toward one another.

But if we analyse a little further, we find that this maintenance of the same configuration is no necessary trait of matter. The surface of a body marks the place where another body impinging is turned back. That place is the edge or limit of the body's stuff; its matter is the potency of turning another body back. A body's substance is its potential causality; 'potential' meaning that the recoil will occur if impact occurs, even though at the moment no impact be taking place. Now it is an empirical result that these places where motion is reversed do maintain the same relative position, and so we speak of permanent bodies, such as the atoms. But it is not a condition of materiality, of solid stuff, that the surfaces in a given body keep the same relative positions; they might change, and lose none of their materiality. All that is necessary for that attribute is the power, the potency of reversing the motion of impinging bodies. The atoms of science, by all the evidence, do keep the same boundaries. But the ether, if there be such a thing, does not; and the conception of the ether can hardly be called quite demolished as yet. There might be a kind of body which resisted impact from a given direction at two points on the same straight line. Such a body would be material, because it offers resistance and possesses inertia, and inertia is, according to high authority, the fundamental attribute of matter.[1] But such a body would have one surface in two places at once. In short, there is no reason why the material solidity or substantiality of a body need not be quite dissociated from its exclusive occupation of one volume at one time. Materiality, which is the potency of offering resistance, does not necessarily imply such exclusive occupation. There is nothing self-contradictory in a material atom being in two places at once. It is simply to be settled on empirical grounds, whether or no there are such atoms. And while the material atoms which the evidence of sense-observation leads us to believe in, do have fixed volume and surface, there might well be atoms of another sort, equally material, because equally potent in controlling the motion of other atoms, which exercise their powers in many places at once. They might exercise these powers in accordance with precise law, and be as orderly and accountable as the electrons; but they would transcend the usual limits of space and time. As the properties of imaginary numbers ($a + b\sqrt{-1}$, etc.) transcend the properties of positive integers, so would the properties of such bodies far outrun those of ordinary matter. But a universe composed of them would none the less be a material universe, and a philosophy which insists that all reality must be material, whether in this new sense or in the usual sense, would be materialism. It would, however, be a wholly positive materialism, since it did not deny being of a sort which transcends the limits of our usual matter.

Now materialism of the customary kind is eternally right when it insists that every event has a place in space and time and a causal relation with the bodies of our sense-world. The nature of mind, as it unfolded itself to us in our enquiry above, is to have all these. Memories are definitely located in the past and in the present nervous system, perceptions in remote space and in our bodies; affective states are located in our bodies and influence the movements of our bodies. In this sense mind is as solid and as substantially material as the hardest steel; but it is not limited in its occupation of space and time, or in its causal action, as steel is limited. Mind is a kind of matter far less restricted than the matter with which physical science is conversant. But the customary materialism is wrong when it fixes *a priori* upon all reality the limitations of *that* matter. It is wrong when it denies that mind has attributes incompatible with those limitations. Dualism is right in declaring that mind, as compared with the matter of our sense-world, is unique; dualism and spiritualism are quite wrong—as wrong as materialism ever was—when they deny materiality and substantiality to mind. Mind is material, because it displays all the positive attributes of matter; it occupies space and time and it acts upon the external world, it resides in living organisms, and extends itself far beyond the limits of those organisms without losing its place in the latter. In fact, if mind were not material, we should have on our hands that dualism of unlike and incommensurable substances, whose absurdity culminated in the mysteries of parallelism. But it is not the duality of the dualism that is wrong, but the irreducibility of the two members to a common denominator; in a word, the total exclusion alleged to hold between the two.

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[1] F. Soddy, *Matter and Energy*, p. 171.

Our great need in this problem is to liberalize our notions. The present age has many failings—we hold no brief for its superiority over the past—but in one respect we have indeed advanced. We have a tolerance of ideas, of which our ancestors scarcely dreamed. We have learned that the non-Euclidean geometry may not be so axiomatic as it was deemed. We have learned that the mechanical scheme of Newton and Laplace may not be the last word of science. We are told today that bodies may change their dimensions when they change their positions. We have learned to respect the desires of all men, to a degree scarcely conceived since the days of primitive Christianity. But we need to take a further step, and to set free our notion of material reality from the bonds of exclusiveness that still fetter that conception. To weak minds, all this liberality is an overthrowing of self-restraint, of logical and moral control; it seems to imply the pardoning of criminals, the equal treatment of all men, equal opportunity for every one in every direction, and the other excesses of extreme democracy. But that is of course an error. Toleration does not not mean laxity, nor does generosity counsel a refusal to blame where blame is due; no more does the substantial mind's transcendence of bodily limitations mean that mind has no precise laws of its own. Of course it has such laws; and it is for a spiritualistic psychology, such as Professor Bergson desires, to state them.

The substantiality of mind is more than a word. The notion of stuff conveys the idea of a permanent potency. We call a physical body substantial to signify that even when it is doing nothing, it is ready to exercise force if occasion arises. If then mind is stuff, it is a permanent potency. But the stuff which is mind, though it occupies space and is located in our bodies, cannot be the same identical stuff as the neurones, muscles and other bodily tissues. These, all our experience teaches, have the same properties as the matter of the external world. It is another sort of substance. Since it escapes the observation of our senses, we naturally say that it is finer than what the ultra-microscope reveals. But being stuff, it would seem to be permanent; there is as much ground for believing it to be eternal as for believing physical atoms to be eternal. Hereby mind-stuff becomes a soul-substance, and an imperishable entity. As we saw above, it is always individuated; as we have just seen, it is permanent. Hereby we are able to make a synthesis of the older materialism of Democritus and the Stoics and the individualism of the scholastic theory. And the result of this synthesis is that the individual soul or person, being as substantial as any electron, is as certain to endure. It may be dissociated from this or that living organism, but it can no more disappear than can an ultimate physical atom. We save the soul, not by demolishing or degrading matter, as idealists or spiritualists have been wont to do, but by understanding and respecting matter, and admitting the absolute reality of both matter and mind.

At present the powers of sentient matter are limited enough.

In memory, perception and foresight, it can by extending itself to a remote space or time, do things which a non-sentient matter is unable to do; it can to a degree preserve the life of its body, and order the physical world in the interest of human progress. Mind cannot, however, directly control the future: it must do that through bodily channels. So it is at present; but we must not be dogmatic, like the materialists, and declare that this will always be the case. Quite possibly mind will evolve new powers, as living bodies have done since the dawn of life. Already there are so many authenticated instances where one mind seems to act directly upon another, in what is called telepathy, that such evolution seems to have begun. It appears now to be possible for one mind-substance to extend itself directly into another. What further powers may be evolved is not our immediate concern; but we do not hesitate to say that the open-mindedness which has characterised many of the members of the S. P. R. is far preferable to the closed circle of our professional philosophy, which either encourages or fears the scientific materialism of the day.

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